Memorandum

Flex your power! Be energy efficient!

To: HECTOR VALENCIA

Associate Engineering Geologist

Date: June 25, 2008

File: 04-249043

Drill Rig Hammer Evaluation

From: DEPARTMENT OF TRANSPORTATION

Division of Engineering Services Geotechnical Services - MS 5

Subject: Standard Penetration Test Hammer Energy Measurements

Attached are the results of energy measurements performed on the SPT hammer associated with the new ACKER MPCA drill rig (C#7003711).

If you have any questions or comments regarding this report, please contact Toua Vang at (916) 227–1060.

BRIAN LIEBICH, P.E.

Senior Transportation Engineer Foundation Testing Branch

Attachments SPT Hammer Calibration Sheet

C: H. Brimhall – ODS (Email)

L. Jensen – ODS (Email)

B. Komorniczak – ODS (Email)

D. Thomas – ODS (Email)

M. Richards – ODS (Email)

TV/JT

SPT HAMMER CALIBRATION

Drill Rig Type:

ACKER MPCA

Vehicle I.D.: C# 7003711

SPT Hammer Operator:

Automatic

Drill Rod:

AWJ

Drill Rig Type	C#	Test Date	Efficiency	N-Value Adjustment Factor,
ACKER MPCA	7003711	6/24/2008	68%	1.13

Where, Efficiency,
$$\eta = \frac{EMX}{ER}$$
 EMX = Measured Energy; ER = Rated (Potential) Energy

N-Value Adjustment Factor,
$$C_{\eta} = \frac{\eta}{60}$$

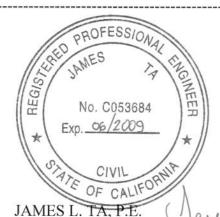
SPT hammer efficiency and N-value adjustment factor for the above-referenced drill rig hammer were determined in general conformance with ASTM D 4633-05.

Toua Vang

Transportation Engineer, Civil

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Associate M & R Engineer

06/25/08

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